

Amendments to the Claims:

This listing of the claims replaces all prior versions and listings of the claims in the application:

Listing of the Claims:

Please amend the claims as follows:

1. (currently amended) An induction heating system, comprising:
a portable power source electrically coupleable to a fluid-cooled induction heating cable
to produce a varying magnetic field;
a portable, programmable power source controller; and
a portable cooling unit fluidically coupleable to the fluid-cooled induction heating cable
to cool the fluid-cooled induction heating cable.

2. (currently amended) The system as recited in claim 1, comprising a
flexible fluid-cooled induction heating cable.

3. (currently amended) The system as recited in claim 1, ~~comprising a~~
wherein the portable power source controller the fluid-cooled induction heating cable is
coupled via connector assemblies to the portable power source and portable cooling unit.

4. (original) The system as recited in claim 3, wherein the portable power source controller is operable to control power from the power source to produce a desired temperature profile in the workpiece.

5. (original) The system as recited in claim 2, wherein the induction heating system is operable to preheat a workpiece before welding and to relieve stress from the workpiece after welding.

6. (original) The system as recited in claim 1, comprising a wheeled cart, wherein the power source and cooling unit are disposed on the wheeled cart.

7. (original) The system as recited in claim 6, wherein the power source controller is disposed on the wheeled cart.

8. (original) The system as recited in claim 1, comprising a temperature feedback device operable to provide an electrical signal representative of workpiece temperature.

9-46. (cancelled)

47. (original) A portable heating system, comprising:
a power source operable to apply power to heat a workpiece;

a power source controller operable to control the heating of a workpiece in response to programming instructions provided by a user to produce a desired temperature profile in the workpiece; and

a cart operable to transport the power source and power source controller to the workpiece.

48. (original) The system as recited in claim 47, wherein the system is an induction heating system.

49. (original) The system as recited in claim 47, comprising a fluid-cooled induction heating cable.

50. (original) The system as recited in claim 47, comprising a cooling unit operable to provide a flow of cooling fluid, the cooling unit being disposed on the cart.

51. (original) The system as recited in claim 47, comprising a temperature feedback device operable to produce a signal representative of workpiece temperature to the power source controller.

52. (original) The system as recited in claim 47, wherein the power source controller uses PID control.

53. (original) The system as recited in claim 47, wherein the power source controller uses PI control.

54. (original) The system as recited in claim 47, wherein the system is operable to raise the temperature of a workpiece to a first temperature and lower the temperature of the workpiece from the first temperature to a second temperature at a desired rate.

55. (original) The system as recited in claim 47, comprising an insulation blanket having a visible line to enable the insulation blanket to be aligned with a weld joint.

56. (cancelled)

57. (new) An induction heating system, comprising:
a portable power source electrically coupleable to a portable fluid-cooled induction heating cable to produce a varying magnetic field;
a portable programmable controller operable to control induction heating; and
a portable cooling unit fluidically connected to the portable fluid-cooled induction heating cable to cool the fluid-cooled induction heating cable.

58. (new) The system as recited in claim 57, wherein the portable programmable controller comprises a plurality of visual indicators.

59. (new) The system as recited in claim 57, wherein the fluid-cooled induction heating cable is connected via connector assemblies to the portable power source and portable cooling unit.

60. (new) The system as recited in claim 57, wherein the portable programmable controller is operable to control induction heating to produce a desired temperature profile in a workpiece.

61. (new) The system as recited in claim 57, wherein the induction heating system is operable to preheat a workpiece before welding and to relieve stress from the workpiece after welding.

62. (new) The system as recited in claim 57, comprising a wheeled cart, wherein the power source and cooling unit are disposed on the wheeled cart.

63. (new) The system as recited in claim 62, wherein a portable programmable controller is disposed on the wheeled cart.

64. (new) The system as recited in claim 57, comprising a temperature feedback device operable to provide an electrical signal representative of a workpiece temperature.

65. (new) The system, as recited in claim 64, wherein the electrical signal representative of the workpiece temperature from the temperature feedback device is sent to the programmable controller.

66. (new) The system as recited in claim 57, wherein the programmable controller uses proportional-integral-derivative (PID) control.

67. (new) The system as recited in claim 57, wherein the programmable controller uses proportional-integral (PI) control.

68. (new) A portable induction heating system, comprising:
a power source operable to apply power to inductively heat a workpiece;
a temperature controller operable to control the induction heating of the workpiece in response to programming instructions provided by a user to produce a desired temperature profile in the workpiece; and
a cart operable to transport the power source and temperature controller to the workpiece.

69. (new) The system as recited in claim 68, wherein the temperature profile is configured for post-weld stress relief of the workpiece.

70. (new) The system as recited in claim 68, comprising a fluid-cooled induction heating cable.
71. (new) The system as recited in claim 68, comprising a cooling unit operable to provide a flow of cooling fluid, the cooling unit being disposed on the cart.
72. (new) The system as recited in claim, 68 comprising a temperature feedback device operable to produce a signal representative of workpiece temperature to the temperature controller.
73. (new) The system as recited in claim 68, wherein the temperature controller uses proportional-integral-derivative (PID) control.
74. (new) The system as recited in claim 68, wherein the temperature controller uses proportional-integral (PI) control.
75. (new) The system as recited in claim 68, wherein the system is operable to raise the temperature of a workpiece to a first temperature and lower the temperature of the workpiece from the first temperature to a second temperature at a desired rate.

76. (new) The system as recited in claim 68, comprising an insulation blanket having a visible line to enable the insulation blanket to be aligned with a weld joint.

77. The system as recited in claim 70, wherein the fluid-cooled induction heating cable is connected via connector assemblies to the portable power source.

78. The system as recited in claim 71, wherein a fluid-cooled induction heating cable is connected via connector assemblies to the portable cooling unit.

79. (new) An induction heating system, comprising:
a portable power source electrically coupleable to a fluid-cooled induction heating cable to produce a varying magnetic field;
a portable programmable power source controller; and
a portable cooling unit fluidically connected to the fluid-cooled induction heating cable to cool the fluid-cooled induction heating cable.

80. (new) The system as recited in claim 79, comprising a flexible fluid-cooled induction heating cable.

81. (new) The system as recited in claim 79, wherein the fluid-cooled induction heating cable is coupled via connector assemblies to the portable power source and portable cooling unit.

82. (new) The system as recited in claim 79, wherein the portable programmable power source controller is operable to control power from the power source to produce a desired temperature profile in the workpiece.

83. (new) The system as recited in claim 79, wherein the induction heating system is operable to preheat a workpiece before welding and relieve stress from the workpiece after welding.

84. (new) The system as recited in claim 79, comprising a wheeled cart, wherein the power source and cooling unit are disposed on the wheeled cart.

85. (new) The system as recited in claim 79, wherein a portable power source controller is disposed on the wheeled cart.

86. (new) The system as recited in claim 79, comprising a temperature feedback device operable to provide an electrical signal representative of workpiece temperature.

87 (new) A portable heating system, comprising:
a power source operable to apply power to heat a workpiece;

a controller operable to control the heating of the workpiece in response to programming instructions for producing a desired temperature profile in the workpiece; and

a cart operable to transport the power source and controller to the workpiece.

88. (new) The system as recited in claim 87, wherein the system is an induction heating system.

89. (new) The system as recited in claim 87, comprising a fluid-cooled induction heating cable.

90. (new) The system as recited in claim 87, comprising a cooling unit operable to provide a flow of cooling fluid, the cooling unit being disposed on the cart.

91. (new) The system as recited in claim 87, comprising a temperature feedback device operable to produce a signal representative of workpiece temperature to the controller.

92. (new) The system as recited in claim 87, wherein the controller uses proportional-integral-derivative (PID) control.

93. (new) The system as recited in claim 87, wherein the controller uses proportional-integral (PI) control.

94. (new) The system as recited in claim 87, wherein the controller is operable to raise the temperature of a workpiece to a first temperature and lower the temperature of the workpiece from the first temperature to a second temperature at a desired rate.